In [2]:
```
# Donwload The Data From Kaggle Website
# Ref --->>>    https://www.kaggle.com/c/m5-forecasting-accuracy/data

#!wget --header="Host: storage.googleapis.com" --header="User-Agent: Mozilla/5.0
```

In [4]:
```
# Unzip the data

#!unzip  m5-forecasting-accuracy.zip
```

In [5]:
```
# import the Library

import pandas as pd
```

In [6]:
```
# Read The Price Data

prices = pd.read_csv('sell_prices.csv')
```

In [7]:
```
# Sort Data Based on Certain Columns
prices = prices.sort_values(by=['item_id','store_id','wm_yr_wk'])

prices.head(5)
```

Out[7]:

	store_id	item_id	wm_yr_wk	sell_price
368746	CA_1	FOODS_1_001	11101	2.0
368747	CA_1	FOODS_1_001	11102	2.0
368748	CA_1	FOODS_1_001	11103	2.0
368749	CA_1	FOODS_1_001	11104	2.0
368750	CA_1	FOODS_1_001	11105	2.0

Product Weekly Price Information We Have.

In [8]:
```
prices.shape
```

Out[8]:
```
(6841121, 4)
```

In [9]:
```
# Price Differnce Between Weeks,Months and Two Months

for win in [2, 4, 8]:
    prices['price_diffrence_{}'.format(win)] = prices[["store_id","item_id","sel
        ["store_id","item_id"])["sell_price"].transform(lambda x : x.rolling(win
    prices['price_diffrence_{}'.format(win)] = ((prices['sell_price'] - prices['
```

In [10]:
```
prices.head()
```

Out[10]:

	store_id	item_id	wm_yr_wk	sell_price	price_diffrence_2	price_diffrence_4	price_d
368746	CA_1	FOODS_1_001	11101	2.0	NaN	NaN	
368747	CA_1	FOODS_1_001	11102	2.0	0.0	NaN	
368748	CA_1	FOODS_1_001	11103	2.0	0.0	NaN	
368749	CA_1	FOODS_1_001	11104	2.0	0.0	0.0	
368750	CA_1	FOODS_1_001	11105	2.0	0.0	0.0	

In [13]:
```
prices.dtypes
```

Out[13]:
```
store_id              object
item_id               object
wm_yr_wk               int64
sell_price           float64
price_diffrence_2    float64
price_diffrence_4    float64
price_diffrence_8    float64
dtype: object
```

In [11]:
```
# Save All The Data in Google Drive

from google.colab import  drive
drive.mount('/drive')
prices.to_pickle('/drive/My Drive/Case_Study1/Price_Data_Preprocessing_1.pkl')
```

```
Mounted at /drive
```